

1 1. A method of graphical block diagram modeling, comprising:
2 providing graphical blocks interconnected to form a graphical subsystem block;
3 constructing a graphical class instance of a graphical class that corresponds to the
4 graphical subsystem block for use in a graphical block diagram model of a user;
5 enabling a change to a value of a parameter of a selected one of the graphical blocks
6 to be made by the user; and
7 constructing from the graphical class instance and the change a graphical subclass
8 instance that inherits structure from the graphical class.

1 2. The method of claim 1, wherein enabling comprises:
2 providing to the user a user interface having a dialog box corresponding to the
3 selected one of the graphical blocks to accept input from the user for any parameter that can
4 be changed.

1 3. The method of claim 1, further comprising:
2 storing data associated with the change in a data structure as subclass data, the
3 subclass data in the data structure defining a subclass from which the graphical subclass
4 instance is instantiated.

1 4. The method of claim 3, further comprising:
2 wherein the subclass data includes a relative path to the graphical subsystem block, a
3 name of the parameter and the changed value.

1 5. The method of claim 1, further comprising:
2 merging the graphical subclass instance with the graphical class.

1 6. The method of claim 1, further comprising:
2 associating a visual cue with the graphical subclass instance to allow the user to
3 distinguish the graphical subclass instance from the graphical class instance.

1 7. The method of claim 6, wherein the user is provided a display of the selected
2 graphical block that has a title, and further wherein associating comprises modifying the title
3 to indicate to the user that a graphical subclass instance has been constructed for the selected
4 block.

5 8. The method of claim 6, wherein the user is provided with a display of the graphical
6 block diagram model that includes the graphical subsystem block, and further wherein
7 associating comprises modifying the display indicate to the user that a graphical subclass
8 instance has been constructed for the selected block.

1 9. The method of claim 10, wherein the structure comprises connectivity and layout
2 information.

1 10. A method of graphical block diagram modeling, comprising:
2 providing a class library comprising graphical classes defined in terms of graphical
3 subsystem blocks, the subsystem blocks comprising sub-blocks; and
4 creating a graphical subclass of a selected one of the graphical classes by modifying a
5 sub-block parameter that is not a top level parameter of the selected class, wherein the
6 subclass inherits subsequent changes to the graphical class.

1 11. A computer program product residing on a computer-readable medium for graphical
2 block diagram modeling, the computer program comprising instructions causing a computer
3 to:

4 provide graphical blocks interconnected to form a graphical subsystem block;
5 construct a graphical class instance of a graphical class that corresponds to the
6 graphical subsystem block for use in a graphical block diagram model of a user;
7 enable a change to a value of a parameter of one of the graphical blocks to be made
8 by the user; and

construct from the graphical class instance and the change a graphical subclass instance that inherits structure from the graphical class.

12. A computer system comprising:

means for providing graphical blocks interconnected to form a graphical subsystem block;

means for constructing a graphical class instance of a graphical class that corresponds to the graphical subsystem block for use in a graphical block diagram model of a user;

means for enabling a change to a value of a parameter of a selected one of the graphical blocks to be made by the user; and

means for constructing from the graphical class instance and the change a graphical subclass instance that inherits structure from the graphical class.

13. A computer system comprising:

means for providing a class library comprising graphical classes defined in terms of graphical subsystem blocks, the subsystem blocks comprising sub-blocks; and

means for creating a graphical subclass of a selected one of the graphical classes by modifying a sub-block parameter that is not a top level parameter of the selected class, wherein the subclass inherits subsequent changes to the graphical class.